

The Boston Medical and Surgical Journal

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Original Articles.

INSUFFLATION OF OXYGEN IN PNEUMONIA.

BY S. J. MELTZER, M.D., NEW YORK.

In the issue of the BOSTON MEDICAL AND SURGICAL JOURNAL for December 28, 1918, an article by Dr. Blodgett appeared, entitled, "The Continuous Inhalation of Oxygen Gas in Pneumonia and Other Diseases," which deals with "a paper by S. J. Meltzer, M.D., LL.D., published in the *New York Medical Record*, October 19, 1918." The article is written in a somewhat sarcastic vein; it contains two criticisms of Dr. Meltzer's paper on the use of oxygen in pneumonia: it does not mention an article by Dr. Blodgett, published nearly three decades ago on "The Continuous Inhalation of Oxygen Gas in Pneumonia and Other Diseases," and that the method used by Dr. Blodgett is much simpler than that "of a battery of ten pieces of apparatus such as no person less skillful than Professor Meltzer could possibly adjust (which must be obtained under his name from . . . New York)". The present writer acknowledges that he is indeed guilty of having written several papers on *insufflation* which, possibly, Dr. Blodgett did not read in original and certainly does confuse various subjects dealt with in these

papers. The "paper" which serves as the starting point for Dr. Blodgett's article was not a paper at all but a letter published by me in the *New York Medical Record*, October 19, 1918, and, judging by the quotations in Dr. Blodgett's article, I cannot help suspecting that Dr. Blodgett's information was derived from sources other than the mentioned letter. I may be mistaken on that point. At any rate, permit me to make the following statement which may throw light upon the points at issue:

In the course of the last nine years I published various articles on insufflation which dealt with three definitely distinct subjects:

1. One series of articles dealt with *intratracheal insufflation* as a method of anesthesia. It has been used on thousands of human beings and has no bearing upon the question of the use of oxygen in pneumonia and other diseases. Dr. Blodgett's reference in his article to this method is unintelligible to me.
2. In a series of articles I dealt with the method of *pharyngeal insufflation* as an emergency method for artificial respiration in man. It is true that the last article on the subject (*Medical Record*, July 7, 1917) is quite a long one, and it is also true that in the course of the last fifteen months I have demonstrated the efficiency of this method to military officers on animals in my laboratory. Whether this method

consists "of a battery of ten pieces of apparatus, such as no person less skillful than Professor Meltzer could possibly adjust" (as Dr. Blodgett chooses to express himself), this can be judged only by men who have seen the apparatus in action or at least have read my article in an unbiased way. At any rate, that apparatus was not intended, and is not recommended, for the administration of oxygen in pneumonia.

3. Some sixteen months ago I published an article in the *Journal of the American Medical Association* (October 6, 1917) on "The Therapeutic Value of Oral Rhythmic Insufflation of Oxygen," with a description of a simple apparatus for its execution. In this article I have indeed recommended the use of the apparatus for the administration of oxygen in pulmonary and cardiac diseases. This apparatus is in no way to be confounded with the apparatus for *pharyngeal* insufflation. As the administration of oxygen by means of this apparatus never failed to remove even extreme cyanosis in cases of lobar pneumonia (tested only on human beings and not on "fatally mutilated animals," as stated in Dr. Blodgett's article) and, as in the present cases of pneumonia due to *streptococcus hemolyticus*, cyanosis is an early and predominant symptom, I published a letter in the *Medical Record* reminding of my recommendation of oral rhythmic insufflation of oxygen.

Any one who takes the trouble to look carefully into the various methods of insufflation which I have recommended for various purposes, ought to see clearly that Dr. Blodgett could deal only with my article on "The Therapeutic Value of Oral Rhythmic Insufflation of Oxygen." Now let us examine the grievances of Dr. Blodgett. 1. I am indeed guilty of not having referred to the doctor's article published in the *Boston MEDICAL AND SURGICAL JOURNAL* 29 years ago on "The Continuous Inhalation of Oxygen in Pneumonia and Other Diseases, with the record of a case, etc." But so I have not mentioned other clinical articles on the subject of which there were quite a large number in the literature published long before the appearance of Dr. Blodgett's article. The few literary references to be found in my article deal only with statements of physiologists, who for more than a century insisted that the administration of oxygen is of no value, because the hemoglobin could not take up any more of the O_2 even under pressure. 2. Dr. Blodgett

states that his method of administration of oxygen is preferable to mine on account of its greater simplicity. Dr. Blodgett chooses to contrast his method with mine which, according to him, consists "of a battery of ten pieces of apparatus, such as no person less skillful than Professor Meltzer could possibly adjust," and goes on to describe as my method, not the one recommended for the administration of oxygen by means of *oral rhythmic insufflation*, but the method of *pharyngeal* insufflation. From Dr. Blodgett's original article (*BOSTON MEDICAL AND SURGICAL JOURNAL*, November 20, 1890) one learns only that the gas was conveyed from the tank . . . directly to the mouth of the patient. He does not say whether it was administered through a funnel, kept near the mouth of the patient, or through a tube kept in front of the mouth, or introduced into the mouth, and how far.

My method contains two additions to the method of Dr. Blodgett, or, if you choose, two complexities: 1. Oxygen is introduced through a flat metal tube, "hollow tongue depressor," which is "inserted into the mouth not farther than the middle of the tongue, so that, if the patient is conscious, the presence of the depressor may cause no gagging or other discomforts. The lips should be kept closed." The advantages of this factor are twofold. In the first place it was experimentally proved (on a human being) that by this method the air of the trachea consisted, after a few minutes, of pure oxygen, while in the administration of oxygen by other methods the air of the respiratory tract becomes enriched only by four or five per cent. of oxygen. In the second place the method has the advantage that immediately after the discontinuation of the insufflation, the hollow tongue depressor may be removed and disinfected. 2. A "respiratory valve" is interpolated in the tubing which permits the insufflation to be rhythmic; by turning the ring of the respiratory valve to the right, inspiration is produced, and by turning it to the left, expiration is permitted. As to the details of the respiratory valve, I have to refer the reader to my original articles.

A continuous insufflation of oxygen has the disadvantage that the inspiratory insufflation continues even during the period of expiration. This disadvantage is especially significant when the muscular power of the patient begins to be diminished and the aid of the expiration by the

accessory muscles becomes greatly impaired. The necessary removal of an injurious surplus of carbon dioxide is thus interfered with by continuous insufflation, and the development of asphyxia is hereby facilitated. Furthermore, the oxygen administered by continuous insufflation without the provision of controlling valves, becomes vitiated with carbon dioxide during expiration.

I consider the addition of the metal hollow tongue depressor and the insertion of the controlling respiratory valve as distinct improvements over the method of continuous insufflation through a rubber tube, a method so simple that I, of course, have tested it at the very beginning of my work.

I consider the administration of oxygen in respiratory and cardiac diseases as a valuable therapeutic measure. The administration of that gas in hospitals as well as in private practice, is still very inefficient and neglected. I am rather grateful to Dr. Blodgett for opening up the discussion of the administration of oxygen by efficient methods; the discussion cannot fail to do some good.

TABLE XVII. LUNG

PNEUMONIA AND EMPYEMA

BY FIRST LIEUT. HORACE GRAY, MEDICAL CORPS, U. S.
ARMY.

[From Medical Service, Base Hospital, Camp Devens, Mass.]

(Continued from page 334.)

20. The relation of *lung involvement* to empyema incidence seems slight, since it followed right, left, and bilateral pneumonia with practically equal frequency: 14% of rights got empyema, 16% of lefts, 18% of bilateral pneumonias.

The case mortality rate was the same, 38% and 39% for right and for left empyemas, while for bilateral empyemas it was, as expected, much higher, 67%.

21. The lobe involved was the lower alone in 75% of the 485 cases. The next most frequent was the lower and upper 16%, then the upper alone 6%, and the middle alone 2%. When both lower and upper were involved, 22% of the cases got empyema; vs. 16% when only one lobe was consolidated.

22. *Bacteriology* showed that:

a. The organism in pneumonia was most

TABLE XVIII

		PER CENT. OF PER. TO GRY EMERIA		PER CENT. OF PER. TO GRY EMERIA		PER CENT. OF PER. TO GRY EMERIA	
		No. Cases PNEUMONIA	No. Cases EMERIA	No. Cases PNEUMONIA	No. Cases EMERIA	No. Cases PNEUMONIA	No. Cases EMERIA
1st 100	Low	68	16	3	0	0	0
	Upper	3	1	0	0	0	0
	Middle	2	0	0	0	0	0
	L. & U.	26	8	5	5	5	5
	None	1	1	0	0	0	0
		—100	—26	26%		—11	
2nd 100	Lower	71	13	7	0	0	0
	Upper	1	0	0	0	0	0
	Middle	2	0	0	0	0	0
	L. & U.	25	3	2	2	2	2
	None	1	1	0	0	0	0
		—100	—17	17%		—9	
3rd 100	Lower	91	18	6	0	0	0
	Upper	4	2	1	0	0	0
	Middle	0	0	0	0	0	0
	L. & U.	5	2	1	1	1	1
	None	100	22	22%		8	
		—100	—10	10%		—4	
4th 100	Lower	74	6	0	0	0	0
	Upper	9	1	1	0	0	0
	Middle	5	0	0	0	0	0
	L. & U.	12	3	1	1	1	1
	None	100	10	10%		4	
		—100	—10	10%		4	
401-485	Lower	61	0	0	0	0	0
	Upper	12	1	1	0	0	0
	Middle	1	0	0	0	0	0
	L. & U.	11	1	1	1	1	1
	None	85	2	2%		2	
		—85	—2	2%		2	
Total	Lower	385	53	15%	22	41%	
	Upper	29	5	17%	2	40%	
	Middle	10	0	0	0	0	
	L. & U.	79	17	22%	10	39%	
	None	2	2	100%	0	0	
		—385	—77	16%	—34	—41%	

often unknown (in 44%), then pneumococcus alone, *i.e.*, without streptococcus (in 44%), then streptococcus alone (in 9%), lastly a mixture of streptococcus and pneumococcus (in 3%).

b. The mortality of pneumonia was greatest when the organism was streptococcus alone, 49%; then from mixed streptococcus and pneumococcus, 36%; then from pneumococcus alone, 12%; and least when the organism was unknown, only 6%.

c. The most frequent organism in empyema was streptococcus alone occurring in 53% of the 77 cases. Next came pneumococcus alone 27%; mixed streptococcus and pneumococcus in 17%, and finally unknown organisms in the remaining 3%.

d. The mortality of empyemas differed from the pneumonias in general by being highest from the pneumococcus alone; 52%. Next in fatality came streptococcus, 46%; and mixed, 31%. This is in striking contrast to the figures obtained by an earlier analysis of the empyemas during the first six months, 53 out of 241 pneumonias. Among these empyemas the mortality was exactly reversed, *i.e.*, highest with mixed pneumococci and streptococci, 66%; then with streptococci alone 49% died, while with pneumococci alone only 38%. This is a remarkable instance of the well known occasional turning of the tables by enlarging the number of cases analyzed. In this case, however, there seems to be an explanation: the first series, the white men, did not die so readily unless the streptococcus was superimposed upon the pneumococcus.

while the negroes later died with the pneumoecus alone.

e. The improvement in the number of cases typed is striking toward the latter part of the period reviewed. The percentage of cases whose bacteriology was "undetermined" in the first hundred pneumonias, 43% unknown; in the second hundred 56%; third 66%; in the fourth hundred 38%, and in the last eighty-five cases of the series only 14%. This satisfactory diminution in the number of untyped pneumonias was largely due to the growth of a general appreciation of: (1) The importance of coughed lung sputa, not hawked-up throat mucus; (2) the surprisingly large number of pneumonias from which such satisfactory specimens are obtainable only after insistence on an early morning coughing spell; (3) the kind of sputum likely to prove serviceable for typing, not easy to describe, but thin rather than thick.

The bacteriology of the 148 Negroes compared with that of the 337 white men showed that the organism in pneumonia was:

1. Mixed streptococcus and pneumococcus in the following relative percentage of black and white cases respectively 1.4% B. vs. 3.6% W.
2. Streptococcus alone in 1.4% B. vs. 12.2% of W.
3. Pneumococcus alone in 68.1% B. vs. 34.1% of W.
4. Undetermined in 31.1% B. vs. 50.1% of W.

In other words:

1. A mixed infection with strep. and pneum.

TABLE XIX. BACTERIOLOGY

ORGANISM	PNEUMONIA				EMPHYSEMA			
	No. Cases	No. Dead	Mortality Per Cent.	No. Cases	No. Dead	Mortality Per Cent.		
Mixed streptococcus and pneumococcus	Type I	4	0	0				
	Type II	3	2	66%				
	Type III	12	1	50%				
	Type IV	2	1	50%				
	Unk.	3	1	33%				
	Total	14	5	36%	13	4	31%	
Streptococcus alone (i. e. without pneumococcus)		48	21	49%	41	19	46%	
Pneumococcus alone (i. e. without streptococcus)	Type I	34	4	12%	2	1	50%	
	Type II	54	7	13%	2	1	50%	
	Type III	38	5	13%	2	1	50%	
	Type IV	80	5	6%	5	2	40%	
	Cult. but type unk.	7	5	56%	10	6	60%	
	Total	213	26	12%	21	11	52%	
Unknown		215	12	6%	2	0	0	
Total		486	64	13%	77	34	44%	

was about one-third as common in the B. as in the W.

2. The streptococcus was about one-ninth as common in the B. as in the W.

3. On the other hand the pneumococcus alone was about twice as common in the B. as in the W.

4. Fewer defective specimens of sputum were obtained from the negroes.

If we compare the 148 negroes not with the total 337 whites but with the *contemporary* 97 whites, we find much the same results.

1. Mixed in 1.4% of B. vs. 8.2% of 97 W.

2. Streptococcus in 1.4% of B. vs. 4.1% of 97 W.

3. Pneumococcus in 66.1% of B. vs. 43.3% of 97 W.

4. Undetermined in 31.1% of B. vs. 44.4% of 97 W.

100

Or in other words:

1. Mixed infection was about one-sixth as common in the B. as the W.

2. The streptococcus was about one-third as common in the B.

3. The pneumococcus was much commoner among the B.

4. And this is the most important feature of the comparison of the black cases with the whites: the former were not only easier to group than the whites in the whole series, but were also easier to get typings on in this *contemporary* series, i.e., during the same period, with the same ward and laboratory methods. In other words, the smaller number of undetermined typings was not due to the fact that the negroes came at the latter part of the series, but apparently to their yielding more satisfactory specimens of sputum.

TABLE XX. BACTERIOLOGY OF 148 NEGROES.

ORGANISM	PNEUMONIA			EMPHYMA		
	No. Cases	No. Dead	Mortality Per Cent.	No. Cases	No. Dead	Mortality Per Cent.
Mixed streptococcus and pneumococcus	Type I	1	1	100%		
	Type II	1	1	100%		
	Type III		
	Type IV		
	Unknown	1	1	100%		
Total	2	2	100%	2	2	100%
Streptococcus alone	2	1	50%	2	1	50%

Pneumococcus alone	Type I	16	3	19%	1	1	100%
	Type II	33	6	18%	1	1	100%
	Type III	20	2	10%			
	Type IV	26	1	4%			
	Cultures but type unknown	3	3	100%	3	3	100%
Total	98	15	15%	5	5	100%	
Unknown	46	5	11%	0	0	0	
Total	148	23	16%	9	8	80%	

TABLE XXI. BACTERIOLOGY OF 337 WHITE MEN.

ORGANISM	PNEUMONIA			EMPHYMA				
	No. Cases	No. Dead	Mortality Per Cent.	No. Cases	No. Dead	Mortality Per Cent.		
Mixed streptococcus and pneumococcus	Type I	4	0	0				
	Type II	2	1	50%				
	Type III	2	1	50%				
	Type IV	2	1	50%				
	Unknown	2	0	0				
Total	12	3	25%	11	2	18%		
Streptococcus alone	41	20	49%	30	18	46%		
Pneumococcus alone	Type I	18	1	6%	1	0	0	
	Type II	21	1	5%	1	0	0	
	Type III	18	3	17%	2	1	50%	
	Type IV	54	4	7%	5	2	40%	
	Cultures but type unknown	4	2	50%	7	3	43%	
Total	115	11	10%	16	6	37%		
Unknown	160	7	4%	2	0	0		
Total	337	41	12%	68	26	38%		

TABLE XXII. BACTERIOLOGY OF 97 WHITE MEN.

ORGANISM	PNEUMONIA			EMPHYMA				
	No. Cases	No. Dead	Mortality Per Cent.	No. Cases	No. Dead	Mortality Per Cent.		
Mixed streptococcus and pneumococcus	Type I	8	0	0	8	0	0	
	Type II	1	0	0				
	Type III	1	0	0				
	Type IV	1	0	0				
	Unknown	2	0	0				
Total	8	0	0	8	0	0		
Streptococcus alone	4	1	25%	4	1	25%		
Pneumococcus alone	Type I	9	1	11%	0	0	0	
	Type II	10	0	0	0	0	0	
	Type III	11	2	18%	0	0	0	
	Type IV	11	2	18%	2	1	50%	
	Undet.	1	0	0	1	0	0	
Total	42	5	12%	3	1	33%		
Undetermined	43	0	0	0	0	0		
Total	97	6	6%	15	2	13%		

A similar bacteriological table seems obvious for the broncho-pneumonias separate from the lobar pneumonias. This is especially desired by anybody interested in the streptococcus, the importance of which has been increasingly realized with each succeeding month of the past winter and spring. It would bring out more clearly the true extent of the supposed *relation between broncho-pneumonia and streptococci*. This relation is of the greatest importance. It can be traced only by using thoroughly reliable data. The use of any other would yield results of apparent value but really only misleading. It is felt that our data, while serviceable for the purposes of the bacteriological tables presented, are not, however, sufficiently reliable for the determination of the relationship under discussion, because:

a. Too many *patients* showing diffuse râles followed later by clinical and x-ray signs of consolidation not definitely either lobar or lobular, were not followed up. Looking back we can only guess. We cannot justly say whether there was:

- i. Bronchitis developing broncho-pneumonic patches.
- ii. Bronchitis developing confluent-lobular broncho-pneumonia.
- iii. Bronchitis developing lobar pneumonia.

b. Too many *sputa* were:

- i. Never sent to the laboratory.
- ii. There considered "defective specimens."
- iii. Not examined for any streptococci.
- iv. Not classified as to whether the streptococci were hemolytic or innocent.
- v. Reported under a different classification on two occasions without any evidence in the clinical record of co-operation between the ward and the laboratory in deciding whether this divergence was due to:
 - i. Faulty technic.
 - ii. Reinfection with a different organism.
 - iii. Super-infection with a different organism.

(To be continued.)

Clinical Department.

REPORT OF A CASE OF CONGENITAL ATRESIA OF THE OESOPHAGUS.*

BY JAMES LINCOLN HUNTINGTON, M.D., J. HERBERT YOUNG, M.D., AND N. CHANDLER FOOT, M.D., BOSTON.

THE obstetrical history in this case is as follows: The mother is 39 years old, with a negative family and past history; date of last catamenia was January 9, 1918. Previously had had two normal labors, the children are alive and well; one miscarriage, followed by uneventful convalescence. The history of this pregnancy is in no way remarkable, the patient started in labor with rupture of the membranes at 2.20 A.M., on November 8th: under gas and oxygen, followed by primary ether at 10.25 A.M. she was delivered of a female child, weighing eight pounds, eight ounces. The delivery was in every way normal. The child breathed at once, but seemed to be secreting a great deal of mucus, requiring constant attention for the first two hours, turning blue repeatedly and choking. Every time there was respiratory difficulty the evacuation of a drachm or two of thick, tenacious, slightly yellow mucus by the mouth would give temporary relief. Between these attacks the child seemed normal.

When first seen by the surgeon, the infant was six hours old. She was well developed and nourished, rather pale for a new-born baby and slightly cyanotic. Her breathing was noisy, but not labored. The head and fontanelles were normal. The mouth and throat were filled with thick, tenacious mucus. The heart was normal in size and position, heart-sounds of good quality, no murmurs. Although the child had not cried lustily since birth, air apparently entered all parts of both lungs; but auscultation was difficult because of the noise made by the mucus in the throat. The abdomen and extremities were normal. There was no paralysis and no evident malformation. At the first examination nothing unusual was suspected. The child appeared normal, except for the large amount of mucus in the throat.

When seen the next day the amount of mucus in the throat was still considerable. Attacks of choking and cyanosis were frequent, sometimes three or four within one hour, and even with oxygen it was difficult at times to get the child breathing again. She had had normal

* Read before the Boston Obstetrical Society, January 28, 1919.

meconium movements and had passed urine. When given water from a medicine dropper and when put to the breast, she would take a mouthful, choke and stop breathing. When the attempt was made to give a tube feeding, the tube met an obstruction five inches below the gums and no fluid would pass this obstruction. Although the tube caused no discomfort when the attempt was made to pour in fluid, respiration would cease. The diagnosis of complete obstruction of the oesophagus was evident. Surgical treatment was not justifiable because of the poor physical condition of the patient, who died on the fourth day, death being due to exhaustion and an inhalation pneumonia which was revealed only at autopsy.

At autopsy the following facts were noted, the protocol will be given in somewhat abbreviated form. The body is 53 cm. in length, well developed and nourished; rigor mortis present in lower jaw, absent in extremities. Post-mortem lividity marked in dependent portions. There are no external abnormalities, the pupils are equal, 2 m.m. in diameter. Upon making the primary incision from suprasternal notch to mons pubis the subcutaneous fat is found to be well developed, the diaphragm is in its proper relationship to the ribs. The umbilical vein is patent throughout, from the healing umbilicus to the liver, 2 m.m. in diameter. Upon opening the thorax the lungs do not collapse.

The heart shows no abnormalities, excepting that it contains a small amount of fluid blood, indicating asphyxia. The right lung lies free, its surface is everywhere smooth and shining and is mottled purplish red and bright salmon-pink. The upper, middle and lower lobes are, for a great part, consolidated, the consolidation being of a patchy nature. The lower anterior margins of the upper and lower lobes show normal aeration and are of a salmon-pink color. On cut section this organ is found to be filled with areas of consolidation averaging 3.5 m.m. in diameter. Throughout these areas there is very little air content, the fluid content is slightly increased, as is the blood content. The bronchi are everywhere markedly congested and contain a slight amount of mucus. The left lung is very similar, the upper lobe being almost normal in color and consistence, with the exception of a few areas of very dark red hemorrhage, averaging 1.2 m.m. in diameter. The lower lobe is markedly mottled and contains numerous patches of consolidation which are

sparsely scattered throughout its substance. On cut section it is for the greater part normal in the upper lobe, except for the hemorrhagic areas just described; cut section of the lower lobe shows similar changes to those seen in the right lung, but much less marked. Its bronchi are exactly like those of its fellow.

Microscopically, the lungs show edema and hemorrhage into the alveolar spaces, with very marked congestion of the capillaries in the alveolar walls, areas of true broncho-pneumonia in which the exudate is composed chiefly of polymorphonuclear leucocytes and red cells. Some alveoli contain a thick, pink-staining mass somewhat suggestive of milk. Fibrin is present in the exudate in small amounts. Compensatory emphysema is noted in the least affected parts of the lungs. The bronchi are filled with pus and there is considerable sub-pleural hemorrhage.

The spleen, liver, pancreas, adrenals, kidneys and internal genitalia are in no way remarkable.

Alimentary Tract. The oesophagus, beginning at the pharynx, extends downward to a point 3.5 cm. below the glottis, where it terminates abruptly in a rounded, slightly tapering, blind extremity not unlike the thumb of a glove. It is 1.5 cm. in diameter, has thickened walls, 2 m.m. diameter, and contains a good deal of thick, tenacious mucus. From its extremity a small musculo-fibrous cord continues to a lower oesophageal segment 2.5 cm. further down. This cord measures 1 m.m. in thickness. The lower segment of the oesophagus opens out of the trachea, just at its point of bifurcation. It appears to be similar to a normal oesophagus in its general structure and size, being one centimeter in diameter, with its walls of normal thickness and color. It terminates normally in the cardiac end of the stomach. The opening into the trachea is a small, transverse slit, about 5 m.m. in width, which communicates with the posterior surface of the trachea at a point directly behind the bifurcation. There is a suggestion of a funnel-shaped bulging of the posterior tracheal wall for 1.5 cm. above this communication.

Microscopic examination of cross sections of the connecting cord, taken at different levels, show no trace of epithelial tissue; it is made up of longitudinally arranged muscle fibres and intermuscular connective tissue. The muscle is striated.

In the accompanying illustration, Fig. 1 is

the posterior view of the specimen, *a*, the upper segment; *b*, the cord, and *c*, the lower segment. Fig. 2 gives the anterior view of the communication of the lower segment with the trachea.



The stomach and intestines present no abnormalities, the former contains a small amount of thick, bile-stained mucus; the latter are partly collapsed and contain a small amount of meconium and some gas. The cause of death was evidently respiratory embarrassment, due to the anomaly and to the inspiration pneumonia that resulted therefrom.

We come now to a consideration of the history of and the explanations for a condition which is common enough to warrant much more mention than has been accorded it in the average system of medicine or surgery; Albutt, Keene, Osler, Pfaundler, and Schlossmann (Le Fetra's translation) all dismiss it with a paragraph or two and even special pathologies, like Kaufmann's, give but brief accounts of this anomaly. Lewis, in Keibel and Mall's *Embryology*¹, devotes much time to atresia of the

oesophagus at birth and puts special emphasis on the most common type, that represented by our case. He outlines the theory of its origin, without going into the subject at length, and gives a valuable bibliography.

A review of three of the authors named in this bibliography will give one a good idea of the work done on this subject and of the various theories to explain the different forms of the anomaly encountered. These three are Forssner², Kreuter³, and Giffhorn⁴. Giffhorn's article is of interest chiefly for its review of the literature in years past; he describes two cases and advances a theory as to the reasons for their existence. Forssner's article takes up the subject of atresiae of the gastro-intestinal tract as a whole, including those of the oesophagus and gives so excellent a summary of Kreuter's paper, that it is unnecessary to refer to it any further.

Summing up the material of these three articles we find that the condition has been known since 1838, when Schoeller described a number of cases of congenital atresiae of the oesophagus, stating that the type represented by our case is the most common. In 1884 MacKenzie described forty-five cases. Kreuter collected no less than one hundred and eleven. In discussing this last series, Forssner ruled out eighteen for various reasons; total absence of oesophagus, double oesophagus, other gross abnormalities present, insufficient data, etc. Of the remaining ninety-three he notes the following facts:

Sixty-four are connected with respiratory tract, sixty-one of them with the trachea, three with the bronchi. Four of those connected with the trachea opened into it in its upper portion, forty-one at the bifurcation. In sixty-one the upper segment ended blindly with a cord connecting it with the lower segment in thirty-three, no cord in five, and no data in twenty-six. There was complete interruption of the oesophagus, with two segments ending blindly, in eleven cases. Of these, six had a connecting cord, five had none. There was membranous closure of the oesophagus in three cases, and a stenosis in fifteen.

Thus we see that the most common type, comprising roughly two-thirds of all congenital atresiae, is one connected with the trachea at its bifurcation, where the lower segment takes its origin; the upper segment ending blindly and

being connected with the lower by a cord of muscular tissue.

There are several theories to explain the anomaly and we shall consider them chronologically. The oldest is that of Klebs and MacKenzie: that too much material was used up in forming the respiratory tract, the oesophagus being interrupted at a point where its substance was, so to speak, appropriated by the respiratory tract. Foerster and Giffhorn took the view that it was to be traced to the period when the oesophagus was still a solid cord and failed to vacuolate and open up properly; a theory based upon comparative embryology and, as has been subsequently shown, quite erroneous, as the human oesophagus is at all times patent, under conditions of normal development, unlike that of some of the lower animals. Kraus combines these ideas, advancing three hypotheses: *a.* That, in the type where the oesophagus is for the greater part obliterated, the respiratory tract has used up the material (Klebs' view). *b.* That those cases with membranous closure "entice one to think of epithelial occlusions." *c.* That the common type is due to pressure exerted by neighboring vessels, with resulting pressure-atrophy, an hypothesis also advanced by Keith, who found anomalies in the branching of the left subclavian artery ("low origin") in three cases where the oesophageal deformity was also present, but which he had to reject later, upon finding several cases where this did not hold true. Kreuter supported Foerster's view.

Forsner's explanation is more logical than any of these, but fails completely to explain the condition. He rejects the theories just cited, as they fail to explain the formation of the fistula which exists in most of the cases. He rejects the epithelial proliferation theory on the grounds that the separation of the respiratory from the alimentary tracts takes place at a period much in advance of that in which the oesophageal epithelium becomes actively proliferative; the two tracts separate before the four millimeter stage is reached, or shortly before, while the proliferative phenomena take place when the embryo is about 19 mm. in length. That he is correct in this surmise is proved by the presence of a well-formed oesophageal atresia of the common type in an eighteen millimeter embryo in the Harvard collection, which corresponds perfectly with our case, excepting that there is a sacculated dilata-

tion of the middle third of the lower segment. Forsner's explanation is that the fusion of the outgrowing lips of the tracheal groove is incomplete at a point corresponding to the bifurcation of the future trachea and that this interruption persists as a fistula, which stimulates later proliferation of the epithelium above, or below it with resultant occlusion at the end of one or both segments; if either end be closed off, a fistula will persist. The characteristic dilatation of the upper segment, such as seen in our specimen, he thinks results from the swallowing of liquor amnii and that this brings about an axial shortening of the cul-de-sac which may cause the rupture and disappearance of the cord connecting the segments.

The best explanation of all is outlined by Lewis, in Keibel and Mall. When the trachea and oesophagus are becoming separated, at the 4 m.m. stage, two processes or wings of the body-cavity project up on either side of the latter, normally exerting enough pressure to groove its outer surface, these grooves running from below upward and from behind forward. These grooves are readily demonstrated in a reconstructed model of a 4 m.m. embryo. Now, supposing this pressure were increased by an increase in the size of these processes, due to an abnormal amount of fluid within them, or to cellular overgrowth, the grooves might become deep enough to mould the oesophagus into the trachea at that point, cutting off an upper and a lower segment, the former usually ending blindly, the latter being switched into the trachea and communicating with it. That portion of the oesophagus between the two wings of body-cavity would be pressed together and ultimately atrophy, giving rise to the cord. It would be well to bear this in mind in the future and investigate such cords microscopically to determine the presence or absence of epithelium.

To recapitulate: the best theory is that, at an early period, the walls of the foregut grow towards one another, forming two folds. Anterior to these folds is the future trachea, posteriorly the future oesophagus. If, while this is taking place, pressure is exerted at a point near the bifurcation of the respiratory tract by the impinging processes of body-cavity already described, the fusion will take place along new lines at this point, resulting in a shunting-out of the lower two-thirds of the oesophagus from the foregut into the respiratory tract and an obliteration of the lower extremity of the upper

third of the oesophagus, with the formation of an upper blind segment, or cul-de-sac communication with the mouth. It is easy to see how such an anomaly, with numerous mucous glands in the pharynx and upper cul-de-sac actively secreting (and possibly hypertrophied in the cul-de-sac) could cause much mucus to collect in the mouth and upper air passages. It could not be swallowed and if inhaled might excite further secretion in the trachea and bronchi from the resulting irritation, establishing a vicious circle.

In closing we wish to express our thanks to Professor Lewis for his kind assistance in the interpretation of this phenomenon.

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Selected Papers.

CHOREA: ARSENIC AS A REMEDY.*

BY GEORGE FOY, M.D., F.R.C.S.I.

"ROUGH NOTES ON REMEDIES," by Dr. William Murray, published in 1896, was one of the most successful books of its year. Its introduction at once produced a favorable impression, and the opening chapter "On arsenic in diabetes, chorea, and asthma," met and satisfied the wants of the great majority of his professional brethren. We have no intention of quoting theories on the etiology or pathology of chorea, either Sydenham's or the so-called *Chorea magna sive Germanorum*. The disease is described under the title Saint Vitus' dance by Sydenham; and we read that Saint Vitus was removed from Sicily when a boy, at the time of the Diocletian persecution of the Christians in the year 303, and suffered martyrdom in Florence. His mortal remains, after many removals, are said to have been interred in the cloister of Koovey in 836.

"At Strasburg many hundred began
To dance and leap, both wife and man,
In open market, lane and street,
By day and night; many did not eat
Until to an end their madness came;
Saint Vitus' they did it name."

* Reprinted from the *Medical Press* of January 22, 1919.

Gregory Horstius, the distinguished professor of medicine at Wittenberg, and afterwards a public physician and president of the University at Ulm, informs us that in the opening years of the seventeenth century some women, whom he described as being disordered in their minds and affected with a peculiar kind of restlessness in their bodies, repaired once a year to the Chapel of Saint Vitus, near Ulm, and continued there night and day, leaping and dancing, till they were so exhausted as to drop down almost dead. Thus, continues he, they were restored, and continued well till the following May, when the same propensity returned, and required a similar course of exercise to remove it. From this tradition the convulsive disease to which children are so liable derives its name. This condition of convulsive neurasthenia is, in some cases, difficult to differentiate from Sydenham's chorea. Hirsh reminds us that the dancing mania is still commemorated in the grotesque procession of the "jumping saints" which is held every Whitsuntide at Echternach. These manifestations are evidently symptoms of hysterical neurasthenia in weak-minded individuals, and, as we see from the older writers, were sometimes successfully treated by purgatives and bleeding. A different condition is found in Sydenham's type, even though only in degree. There are, however, some cases intermediate between these two in which the arsenic treatment is peculiarly successful. Of these Mr. Salter, of Poole, put some cases on record one hundred years ago, and successfully treated them in the manner Dr. Murrell so happily, and unconsciously, re-introduced. Eliza H., aged 17, has had chorea Sancti Viti for three months. "The muscles of the arms are most affected with the irregular and involuntary motions, but those of the trunk and lower extremities are considerably under the influence of the disease; indeed, the whole body is frequently thrown into the most grotesque attitudes." She was put on four-drop doses of liquor arsenicalis three times a day, with directions to add one drop to each dose every day. Ten days after she was taking fourteen drops in each dose, "and is apparently getting rapidly well." She is directed not to increase the dose any further. Three months later "there has not been any return of the chorea." Miss P., nine years of age, affected with chorea, September 6, 1817. Fear is supposed to be the exciting cause. On the 24th of the month the symptoms

were greatly augmented in severity; her nights were greatly disturbed, and she was incessantly in motion during the day. The function of speech was nearly suspended. On this day she was put on the arsenic treatment, taking three drops daily. October 30: "There have been no symptoms of chorea for the last four or five days. Ten days later there was a slight relapse, sleep being interrupted by jactitations; the liquor arsenicalis was resumed and continued for five or six weeks, long after all the symptoms had disappeared, and at the time of reporting, April, 1819, Miss P. was in the enjoyment of good health." October 27, 1817: M. R., twelve years old, tall for her age, and of a delicate constitution. She has been affected with chorea for a long time, and for the last six weeks has had it in a very violent degree. "The whole system of voluntary muscles is subject to the jactitations, which during the day are interrupted, and at intervals are exceedingly violent; and notwithstanding, at night the convulsive motions are less frequent, yet they often then take place to such a degree as to deprive her of sleep for several nights together. To prevent her injuring herself in the exacerbations of the disease, persons were employed to hold her; and at all times when out of bed it has been found necessary to fasten her to her chair. Arsenic was given as in other cases in gradually increasing doses, until toxic symptoms were produced. November 20th: "The patient is able to dress and undress herself with ease. She walks well and articulates with tolerable fluency." November 27: "The patient is quite recovered; there does not appear to be the least symptom of her unpleasant complaint. She is at this time working with her needle, and has just read to me a short poem to show how perfectly she has recovered the power of articulation." June 2, 1818: John E., fourteen years of age, suffered from chorea three years ago, had a relapse six weeks prior to coming under treatment, suffered from the usual symptoms. August 1, returned to his work as a coach-maker's apprentice, free from all symptoms for four weeks past.

The first recommendation of arsenic in the therapeusis of chorea, or one of the first, is that of Mr. Thomas Martin of Reigate, who in February, 1813, placed the following case on record:—A girl, aged fourteen, subject to involuntary motions of the limbs, almost incessant, and so violent as to produce severe bruises

by blows inflicted on herself. She seized everything within her reach, dashing and throwing these about continually. During her short and disturbed sleep in the night she had very frequent agitations and convulsive movements, and was much harassed by nightmare. She suffered from severe headaches, and had difficulty in swallowing and masticating her food. Her articulation was broken and indistinct. A strong cathartic proved that her bowels were not loaded. Her head was shaved and bathed several times a day with cold water and vinegar; the shower bath used every morning, and her use of animal food was restricted. Infusion of digitalis was prescribed, and all without any beneficial effect. A compound gamboge pill was given every night, so as to act gently on the bowels, and the solution of arsenic three times a day, in doses beginning with five drops, and increasing one drop every day, until it might begin to disagree with the stomach and bowels, which it did when it was augmented to thirteen drops. The dose was then diminished, and continued at about ten drops, during six weeks. Soon after this plan was adopted the symptoms began to abate, and they gradually subsided, until the cure was completed. The use of digitalis and afterwards of arsenic by surgeons may with much probability be ascribed to the edition of Fowler's *Medical Reports of the Effects of Arsenic in the Cure of Agues, Remitting Fevers, and Periodic Headache*, published in 1786, to which Dr. Withering contributed a letter, as did Dr. Arnold. For neurotic convulsions the free purging recommended so strongly by Sydenham,—"bleeding and purging most alternate,"—held its ground. Such a case is that of Dr. T. Watt, Lecturer on the Practice of Medicine, Glasgow, which was published in February, 1814, under the title, "Jactitation, or Chorea." The patient, Mary W., aged ten years, was on the first of January, 1813, seized with most excruciating headache, accompanied with almost incessant vomiting. She required her body to be kept always in a perfectly erect posture. If even the head was allowed in the slightest degree to incline backwards or forwards, or to either side, it increased the pain so remarkably as to render it intolerable. She never lay down until completely exhausted, and at the very point of falling asleep. These symptoms continued four weeks with little variation, but during that time she lost the power of speech and of walking.

In February she was seized with a propensity to turn round upon her feet like a top, which she did from morning to night. In March she lost her speech, and was seized with fits of rolling her body as a roller; two attendants, one at her head and another at her feet, as she lay across the bed, lifted her to the head of the bed, and she immediately rolled again to the foot. These fits lasted six or seven hours a day. To try to stop this a large bucketful of cold water was dashed over her body, with very good result. She continued this motion for six weeks. Hundreds came to see her.

In April she had convulsive spasms, "drawing her head and her heels nearly together, bent up like a bow, then allowing them to separate, her buttocks fell with considerable force on the bed." She repeated the same thing ten or twelve times a minute for fourteen hours a day. This continued for five weeks, when she was seized with a propensity to stand on her head. Resting on her knees and elbows, she placed the crown of her head a little farther down in the bed than her pillow; she then elevated the trunk and lower extremities directly to the roof of the bed; as soon as the body was elevated in this manner, all muscular exertion seemed to be withdrawn, and it fell down as if dead. She repeated this movement from twelve to fifteen times a minute for fifteen hours a day. These extraordinary performances took place in the presence of many physicians. She began at a particular hour every morning, and discontinued at a given hour at night. When micturition was seen to begin she had to be forcibly held down until the act was completed. Her bowels never acted except in consequence of an injection. She was brought into Glasgow during the night, in an open gig, and returned home in the same manner. The day following she was seized with spontaneous purging, and soon after that she became more tractable. She took any purgative that was prescribed. In the course of a few weeks she recovered her speech completely, and also her former health, strength and spirits. Purgatives were diligently applied and operated powerfully. We can hardly fail to see that this cannot be considered as a case of Sydenham's chorea; the acts were purposive, and gratified the girl's vanity by attracting the attention of strangers.

A much more important case is that of a girl, eleven years of age, Christian Shaw, of Renfrewshire, to which reference has been made

in the article, "Robert Houstoun," as the notorious "Bargarran Case." This child is described as having had violent fits of leaping, dancing, running, crying, fainting, which first manifested themselves in August, 1696, and were ascribed to witchcraft. Not only Renfrewshire, but all Scotland became excited and concerned in the case. "A true narrative of the sufferings of a young girl, who was strangely molested by evil spirits, and their instruments, in the West, collected from authentic testimonies," is the title of one of the many pamphlets of the day. The clergy were most active on the occasion, and took full credit for the perfect restoration to health of the child in the March of the year following. They certainly were energetic in their contest with the Evil One. Besides days of humiliation, two solemn fasts were observed throughout the whole bounds of the presbytery, and a number of clergymen and elders were appointed in rotation to be constantly on the spot. December had come and gone, and as yet no sign of improvement, so the clergy decided to call in the assistance of the lay element, and a numerously signed memorial was presented to His Majesty's Privy Council to take steps to exorcise Christian Shaw. On the nineteenth of January, 1697, a warrant was issued setting forth "that there were pregnant grounds of suspicion of witchcraft in Renfrewshire, especially from the afflicted and extraordinary condition of Christian Shaw, daughter of John Shaw, of Bargarran.

"A commission was therefore granted to Alexander Lord Blantyre, Sir John Maxwell, Sir John Shaw, and five others, together with the sheriff of the county, to inquire into the matter and report. This commission is signed by eleven privy counsellors, consisting of some of the first noblemen and gentlemen in the kingdom.

"The report of the commissioners having fully confirmed the suspicions respecting the existence of witchcraft, another warrant was issued on the fifth of April, 1697, to Lord Halleraig, Sir John Houstoun, and four others, "to try the persons accused of witchcraft, and to sentence the guilty to be burned or otherwise executed to death as the commission should incline."

The commissioners, thus empowered, were not remiss in the discharge of their duty. After twenty hours were spent in the examination of

witnesses, and counsel heard on both sides, the counsel for the prosecution "exhorted the jury to beware of condemning the innocent, but at the same time, should they acquit the prisoners in opposition to legal evidence, they would be accessory to all the blasphemies, apostacies, murders, tortures, and seductions whereof these enemies of heaven and earth should hereafter be guilty." After the jury had spent six hours in deliberation, seven of the miserable wretches, three men and four women, were condemned to the flames, and the sentence faithfully executed at Paisley on the tenth of June, 1697.

It is sad to think that Sir Gilbert Reane's address came too late to influence such a jury and such judges. Writing in July, 1813, he says: "Might not these strange delusions have been properly enough enumerated in the list of diseases which have disappeared? Some of those who have been accused of witchcraft believed themselves guilty, and might not they be stated as laboring under a species of epidemic insanity?"

Reprint from Journal.

RUPTURE OF THE AORTA WITHIN THE PERICARDIUM.*

BY JOHN WARE, M.D.

CASE 1.—May 18, 1832. Mr. J. L., aged 30, an officer in one of the banks in this city, called on me for advice. He had been indisposed for some months. He more particularly ascribed the commencement of his indisposition to a severe cold with which he had been affected during the preceding winter. This, he said, had been accompanied by a peculiar feeling of obstruction at the bottom of the windpipe. Though never well since, his attention had not been called to his symptoms till within a few weeks. He now complained principally of pains and stiffness in the muscles and joints of all the limbs, more especially of the shoulders and arms. These were quite tender to touch. These pains, which he called rheumatic, and said he had suffered from before, were worse during the evening and in the night; so that his nights were restless and unrefreshing. He had lost flesh. His countenance, which in health was remarkably ruddy and healthy, was thin

and pale; the lips, especially, seemed quite destitute of blood. The unhealthiness of aspect was out of proportion to the actual emaciation. He had a great general feeling of weakness, but complained of hardly anything else. His appetite was indifferent, but he was still able to eat moderately and to digest pretty well. The tongue had a slight white fur. The pulse was 84. There was no disturbance in the respiration, and no cough. On examination of the heart there was no increased impulse; but a slight bellows or rasping sound was heard on the left side—as well as could be judged—occurring between the two sounds.

I continued to see Mr. L. occasionally for two months. The nature of the disease continued obscure—the unnatural sound in the pulsation of the heart was invariably found on examination, but no other symptom pointed particularly to this organ as the seat of disease. The only additional symptom which made its appearance during this period, was a considerable tenderness or soreness across the lower part of the chest; in consequence of which, a disagreeable sensation of jarring was occasioned by walking, or by any sudden motion. His system was slightly affected by mercurials—his diet was regulated—he took mild tonics, and the warm bath frequently—rode gently on horseback, and went a journey of some weeks. During this treatment, his general health and appearance improved, and he gained a little flesh. The pains and soreness of the muscles subsided under the use of guiacum and the application of leeches, and the tenderness in the chest was relieved by a succession of small blisters. About the end of July he felt himself so far restored as to resume his duties at the bank, and continued there to his death. The amendment, however, was partial and temporary. I never saw him again, but was informed that he continued to grow more feeble—to complain especially of excessive weakness and faintness, and of great soreness across his chest, so that any jar in walking produced intense uneasiness. But he had no cough, no difficulty of breathing, and the appetite continued good.

November 1, he died instantaneously, while conversing with a person at the bank. His body was examined the same evening. The lungs were perfectly healthy. The pericardium was found distended with more than a quart of coagulated blood, from the rupture of an aneurism of the aorta, lying just without the

* Reported to the Boston Society for Medical Improvement, and published in the issue of the JOURNAL for March 27, 1833.

coronary artery, between the aorta and pulmonary artery. The opening through which the blood was effused was about one-third of an inch in diameter. The walls of the aneurism were very thin, but there was much thickening of the arterial coats in the neighborhood. Some of the bronchial glands were found ossified. The digestive organs, apparently, were in a perfectly healthy state. The small intestines were filled with chyme, and the lacteals distended with chyle.

Case 2.—January, 1833. I was called, about 10 in the evening, to see a gentleman who was supposed to be in a fit. I found him dead. On examination of his body the ensuing day, a ruptured aneurism was found, situated in the same part of the aorta as that described in the preceding case, and corresponding to it in appearance. The pericardium was distended with blood.

He had appeared on the day of his death to be in his usual health and spirits, had made no complaint, had attended public worship as usual, and ate a pretty hearty supper. His death took place immediately after getting into bed. Upon a more particular inquiry with regard to his previous state of health, I found, although he had not complained of indisposition, he had taken no medical advice, yet that he had not been well for some months. His countenance had been remarkably pale; his lips, especially, very pale for some time. During the last summer he had complained frequently of a troublesome pain in the left side; and during the autumn, of rheumatism of the shoulders. Probably many other symptoms might have been detected, had he been examined by a physician.

Upon comparing these cases together, we find a striking similarity in the appearances after death, and, so far as we have materials for judgment, in the symptoms during life. The symptoms common to both, were—a peculiar paleness and sickly appearance of the countenance generally, and especially of the lips—a pain and tenderness in some of the joints or muscles, mistaken for rheumatism—and some uneasiness, tenderness or pain about the chest. In each there was also absent, in a remarkable degree, almost every symptom which would direct attention to the heart or large vessels as the organ diseased; there was no cough, no dyspnoea in any position, no dropsical effusion. In the first case there was no affection of the

circulation, no irregularity of the pulse, no difficulty of breathing on exercise, and it is not improbable that this might be the case with the second also. The only circumstance in the person under my care, which excited a suspicion that the disease might be connected with the heart, was the absence of evidence of disease in any other part, and the anomalous affection of the limbs. The detection of the sound accompanying the heart's action contributed to strengthen this suspicion, but could hardly be said to confirm it.

American Medical Biographies.

WALTER JAMES DODD (1869-1916).*

Walter James Dodd, pioneer roentgenologist and a martyr to his specialty, was born in London, England, in the year 1869 and came to this country as an immigrant boy at the age of 15. He was early moved to follow the sea, but was induced by the college authorities, impressed by his ability, to continue life here as an assistant in the chemical laboratory of Harvard College in Cambridge, Massachusetts. He acquired a profound knowledge of chemistry, and in 1892 was appointed to the Massachusetts General Hospital as assistant apothecary, and four years later, as apothecary. It was in this capacity that he undertook experimentation with x-rays, under the usual unfortunate and restricted conditions which obtained in the early days. A severe dermatitis was therefore sustained in 1896, and he underwent his first operation for its results in 1898. Since that time he had been the subject of fifty operations for roentgen dermatitis and its sequelae.

Seeking to dignify further his work, which already, through his sacrifices, had attained high dignity, Dr. Dodd studied at the Harvard Medical School in 1900 and 1901, but completed his course and was graduated from the medical department, University of Vermont, in 1908. From that year until his death he held the position of roentgenologist to the Massachusetts General Hospital, an official recognition of what had been, in reality, his position for many years.

With the organization of a department of roentgenology in Harvard University, he was

* From the forthcoming "American Medical Biography," by Dr. Howard A. Kelly and Dr. Walter L. Burrage. Any important additions or corrections will be welcomed by the authors.

appointed instructor, a position which he held at the time of his death. He was an honored member of the St. Botolph Club of Boston, as well as of many medical societies, in addition to his membership in the American Roentgen Ray Society.

He married Margaret Lea of Moncton, Nova Scotia.

Dr. Dodd died December 18, 1916, following still another operation for infected glands.

Such, briefly, were the events in a life of singular beauty—the life of a gentleman, loving and beloved; cheerful beyond conception in the face of physical anguish. Glorified by a martyr's soul, his face turned toward the horizon of high purpose, with an obliteration of self that cheapened and made tawdry the usual motives of ordinary men. He journeyed steadily on toward that horizon, turning into the gold of loyal friendship all those who came within the Midas-touch of his personality.

A life such as his gives charity a new meaning. As a crown to its later years, his ear was alert to hear from the far land of his adoption the call of the nation of his birth, in dire need of the peculiar service which he could give. D espising physical handicaps and added risks, he hastened forth to labor for England with a heroism that even she knew not of.

Thus again have fallen the burden and the staff, and again has another been received into the glorious band of those whom self-sacrifice, upon the altar of a noble cause, has immortalized.

PERCY BROWN, M.D.,

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Book Reviews.

The Surgical Clinics of Chicago, June, 1918. Volume II. Number 3, with 63 Illustrations. Published Bi-Monthly. Philadelphia and London: W. B. Saunders Company.

The June number contains articles from 15 clinics. The contributors are: Drs. Albert J. Ochsner, Arthur Dean Bevan, Gustav Kolischer, Frank Smithies, Carl Beck, Frederic A. Besley, Frederick G. Dyas, Nelson M. Percy, Daniel N. Eisendrath, Edwin W. Ryerson, Edward H. Ochsner, Coleman G. Buford, Roger T.

Vaughan, Thomas J. Watkins, and George E. Shambaugh.

The subjects vary widely. Among the simpler ones are: "Umbilical Hernia in Infants and Children," by Dr. Coleman G. Buford; "Bunions," by Dr. Edwin W. Ryerson; "The Treatment of Potential and Acquired Static Flat-foot," by Dr. Edward H. Ochsner, with his personal method of strapping. Chest injuries are interestingly dealt with by Dr. Daniel N. Eisendrath. Dr. Frederick G. Dyas emphasizes the thing too often forgotten in some clinics, major surgery under local anesthesia. Dr. Frederic A. Besley discusses 11 cases of "Surgical Affections of Stomach and Duodenum"; Dr. Carl Beck, "A New Method of Gastrostomy;" and Dr. Frank Smithies reports a series of patients, and then discusses 1,000 cases of "Gall-bladder Disease"; this is an excellent piece of work condensed into 20 pages. Dr. Arthur Dean Bevan writes concerning "Kidney Stone; Ureteral Stone; Cholelithiasis from Obstruction Due to Common Duct Stone; Large Ulcerating Sarcoma of the Neck; Huge Fibroma in the Mesentery at Ileocecal Junction and Jejunal Obstruction Due to Adhesions about Site of Gastro-enterostomy, and Two Large Tumors."

The June number seems to us to be exceptionally good.

Reclaiming the Maimed. R. TAIT MCKENZIE, M.D. New York: The Macmillan Company. 1918.

To physical therapy must be entrusted the restoration of many who have been injured in war service. This little volume, *Reclaiming the Maimed*, describes the unusual conditions brought about by the war and presents various curative devices. Treatment by physical therapeutic methods is particularly applicable to injuries to peripheral nerves, scar tissues, old septic wounds, to the final cure of post-operative conditions, to functional neuroses, to conditions commonly designated by the name of "shell shock," to sprains and fractures, rheumatism, flat foot, and other postural defects. In treating these conditions, galvanism and ionization, the faradic current, radiant heat and light, hydrotherapy, and massage have been found of practical value. The technique of these methods of treatment is explained in this book. In addition, twenty appliances designed for the re-education of weakened muscles and stiff joints are described. Two of the most interesting chapters deal with the importance of gymnastics and occupation in treatment. The value of physical therapy is being recognized; its purpose and achievement are clearly presented in this volume.

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THE TOXICOLOGY OF DIGITALIS.

DIGITALIS presents problems of a serious nature to both pharmacology and therapeutics, a truth which may be appreciated by reading the enormous bulk of experimental and clinical studies poured out upon the subject. There must be some serious reason why the inquiry into the constitution and effects of the drug, such as they are assumed by the practical physician as a basis for his deductions, should reach the gigantic proportions which we know today. The old doubt as to the possible dangers of large doses has recently come under discussion, but it would be too much to say that the exposition of the newest principles of investigation and development of the function of digitalis in disease had actually settled the question of its toxic properties. Some authorities, like Mackenzie, state that it would be a great advantage if writers would explain clearly what is the danger of which they are afraid. In thirty

years' familiar use of the drug he has never seen any evil result from its use "when given in the manner I have indicated" (Diseases of the Heart, 1918, p. 379). Other writers, while appreciating this and the great value of the "tonic" effects of digitalis, as well as the helpful assurance of Mackenzie that he "has never yet come across an ineffective preparation," yet maintain that the characteristic action on the heart may be harmful, either because the preparations of the drug are of varying strength or because they have been pushed too far.

As regards the first point, tests of the strength of different preparations have revealed great uncertainties. For example, Dr. J. H. Pratt observes (*Pharmaceutical Journal*, September 14th, 1918): "In a study of twenty-four specimens of American digitalis, both wild and cultivated, from different parts of the Union, six were found to be above the U.S.P. standard, three were exactly of standard strength, and fifteen were below it." He complained that large wholesale drug houses supply an inferior digitalis. The same thing is true of tinctures of straphanthus, and it is by no means improbable that this circumstance and the increase of the strength of the tincture to ten per cent. led to some untoward accidents in recent years. As regards the special application of digitalis and other remedies of the closely related group of poisons, there is an obvious danger in these variations of quality. That they have been the cause of fatal cases cannot be doubted by any one who has examined either the literature of this subject or the clinical records of practice.

The most explicit statements on this point, backed by practical and theoretical knowledge, are those of the French physicians, Huchard, Vaquez, and Bardet. Recently Fiessinger has sought to set forth the essential doctrine of the toxic nature and significance of digitalis; in which the drug is viewed no longer merely, as hitherto, from the standpoint of pharmacology and chemistry alone, but from that of dynamics, for which its "tonic" action is so essential a characteristic. In his latest article (*Rev. gen. de clin. et de ther.*, 1916, Vol. 30, p. 536) he develops his objections, briefly, as follows: "We should not return to the prescription of digitalis, if its use did not continue to cause errors in therapeutics, prejudicial to the patient. The errors in the use of digitalis may

be grouped together in six classes: 1. Prescribing digitalis in nervous disorders of the heart; 2. It is often prescribed in doses too large; 3. Sometimes the physician waits to prescribe it until symptoms of myocardial heart-block have reappeared; 4. The drug is stopped when the heart has recovered its contractility; 5. Success is expected from large doses when small doses have failed; 6. Small doses are prescribed for too long a time." It is under the conditions of 4, as Fiessinger points out, that most of the clinical accidents, often fatal ones, have occurred. In fact a case somewhat similar is recorded by MacKenzie (*Diseases of the Heart*, p. 236). In estimating the cause of this effect Fiessinger argues that the muscle of the heart is already exhausted, and yet it is aroused to an effort and called upon to put forth more energy and work by the stimulus of the drug. It does not require much imagination to perceive the result. The heart collapses suddenly as would any other muscular fibre if it had to do such constant work; for, except in the refractory phase, it is admitted that the muscle is normally always ready to respond to a stimulus. The actual point of application of this stimulus is said by Chio to be the vagus, in the tract which is the site of action of atropine, which prevents the diastolic arrest produced by digitalis (*Archivo di Fisiologia*, May, 1916.) All the effects of digitalis increase the kinetic energy of the heart, and consequently the work of the ventricle, and it is a proof of the wonderful potential power of this organ that over-stimulation is not oftener fatal.

Vaquez sums up the matter by saying that in these circumstances "digitalis is the cause of the very trouble it is intended to remove." The effects are often overlooked because digitalis poisoning is not common, except (as Taylor observes) "in the shape of overdoses given medicinally but injudiciously, which produced unpleasant symptoms, and probably hastened the end in many cases of heart disease. Sir Thomas Stevenson has seen a patient under the influence of digitalis die very suddenly on being raised by the nurse from the recumbent to the sitting posture."

This statement exactly describes what happens, but it has never been made clear whether digitalis or some of its constituents was the toxic agent. One reason for this obscurity is the habit which many writers have of speaking of digitalis, as digitalin, digitoxin, or some other

constituent of the leaf. An eminent writer on pharmacology has labored hard to prove that the members of the group, antiarin, strophanthin, neriine, digitalin, digitoxin, and digitalein are "pure substances, and the inference of course, is that their effects are uniform. He lays much stress on their common property of resting the heart. Adopting this argument as a basis for practice, he conjectures that the effect of digitalis is nothing but the combined action of digitalin, digitoxin, and digitalein. The view of Focke and Ziegenbein is somewhat different. "The power of the leaves is not equivalent to the proportion of digitoxin in them." This appears to be the opinion of Kosmann, and it is supported so far as may be judged by the facts of poisoning. As reported by Tardieu-Roussin, Casper, v. Jakob, and many others, a decoction of digitalis has a poisonous property of its own. The toxic characters of the most powerful of the constituents of digitalis, digitalin, and digitoxin are not clearly defined. "The extractives," writes MacKenzie, "which go under such names as digitalin, digitoxin, strophanthin, we have not used—because they are not sufficiently definite to be recognized." However, the case of Koppe, poisoned by a dose of 1/34th of a grain of digitoxin, is significant.

The evidence, though not of the clearest nature, shows that digitalis is probably responsible for far more fatal accidents than is commonly believed. Its great defect from this point of view is its property of being excreted much faster from the stomach than from the kidneys, which has led to the name of cumulative poison. It seems, however, that this effect is not the chief cause of mischief, but the almost indefinable way in which it produces a collapse of the heart, indefinable at least except to those who have seen it.



THE CARE AND RE-EDUCATION OF CRIPPLES.

THE care and re-education of cripples, whether in military or in civil life, presents many problems to be overcome. *The American Journal of Care for Cripples* considers these problems, both from the point of view of the disabled and of society. It is not only the actual reeducation which must be accomplished, but often it is the desire to be re-educated which

must be created in the first instance. In France the number of *mutilés* who are brought to realize the necessity of training themselves for future industrial life is increasing daily. In time, the sentiment and gratitude which now seeks to reward the heroism of the maimed by shielding him from the harsh severities of life, will no longer last, and the crippled soldier will be obliged to face reality, totally unfit, unless he accepts the chances which are now given to him to fit himself for a useful place in the world. Something more must be done than to provide mere training; in the schools themselves there must be a homelike atmosphere, and besides work, there must be also play and comfort, and regard for the soldier's individual interests.

The Vocational School for Disabled Soldiers at Nantes, France, has made successful experiments which are worthy of mention. In September, 1914, the municipality of Nantes organized a hospital for the wounded, and in 1916, it was given over entirely to convalescent patients. Without news from their families, with their physical capacities greatly reduced by their injuries, these men awaited the end of the war a prey to dark discouragement and anxiety. Efforts to better their condition by teaching the men trades showed results in a surprisingly brief time, and with the renewal of their energy, the men ceased to regard themselves as human waste and became active, skillful workmen. A re-educational school was organized and the government stood ready to support it. This training was far superior to the system of training disabled men by placing them as apprentices in private shops, where no attempt was made to adapt the work to the physical powers of the apprentice nor to grade it according to his capabilities. The trades taught are: locksmithing, carpentry, watch and clock making, basketry, sabot, clog, and shoemaking, and tailoring. A commercial course was organized to train men as bookkeepers, business clerks, and civil service employees. The length of the training course is twelve months, and after the first three months, pupils are allotted fifty per cent. of the value of their labor on any piece of work having market value. In the interests of the school, breaches of discipline have to be punished; but the morale of the pupils, as a rule, is excellent. Up to the present time, the school at Nantes has experienced no difficulty in placing its pupils and none have been placed at cut wages.

In South Africa, the problems which arose in connection with her disabled soldiers were exceptional. At the outbreak of the war, South Africa had no facilities for manufacturing modern artificial limbs, and only insufficient means for the technical education of the civil population. A Vocational Training School has been established in connection with the hospital in Richmond Park, and training is given in the workshops to enable the men to become expert workmen in a large number of trades. Highly skilled professional instructors are employed, a fact which makes the men realize that an extraordinary opportunity is being afforded them. Three factors are considered in determining the patient's future career: (1) the man's own inclination; (2) his physical disability; (3) his suitability from an educational standpoint. Approximately ninety per cent. of those disabled, for whom vocational training is appropriate, voluntarily take advantage of opportunities afforded them.

In every country, in rehabilitating disabled soldiers for civilian life, there are distinct social responsibilities which must be recognized. In addition to medical treatment, re-educational treatment, and a manifestation of the best spirit among the men, a constructive, and not a demoralizing, influence must be exerted by the family, the employer, and the community at large in order to insure the complete success of the program. The first responsibility on the part of the family of the injured man is to see the hopeful rather than the depressing aspect. Families should know of the possibilities of re-education and re-employment and of the provisions being made for the disabled. The second responsibility of the family is to understand the importance to the disabled soldier of the proffered training for self-support, and to encourage him in every possible way to undertake it. It is the duty of the family to stand behind the man during his course of training and to try in every way to encourage rather than dishearten him, and to make the home influence as truly helpful as possible after his return from hospital or school.

In the readjustment of the crippled soldier to civilian life, the employer has a very definite responsibility. It is a mistake to be willing, from patriotic motives, to find for ex-soldiers any odd jobs which are available, regardless of whether the men can earn their wages or not. For the disabled man a constructive job must be found,

which he can hold on the basis of competence alone. Working in this way, he can be self-respecting, happy, and can look forward to a future. Employers should study the jobs under their jurisdiction to determine what ones might be satisfactorily held by cripples, and give cripples preference for these jobs.

The responsibility to the disabled soldier on the part of the community at large is more complex. Hero-worship and inappropriate entertainment are to be avoided. But perhaps the greatest injury which the general public can do to the disabled soldier is to foster the prejudice against the disabled, the incredulity as to possible usefulness, the apparent will to pauperize, and the reluctance through usual channels of opportunities to give the handicapped man a chance. The handicap of public opinion is a greater obstacle than amputation of limb or loss of sight. In the words of John Galsworthy:

"This comrade of ours is not your puppet. He shall yet live as happy and as useful—if not as active—a life as he ever lived before. Do your worst; you shall not crush him! We shall tend him from clearing station to his last hospital better than wounded soldier has ever yet been tended. In special hospitals, orthopedic, paraplegic, phthisic, neurasthenic, we shall give him back functional ability, solidity of nerve or lung. The flesh torn away, the lost sight, the broken eardrum, the destroyed nerve, it is true, we cannot give back; but we shall so recreate and fortify the rest of him that he shall leave the hospital ready for a new career. Then we shall teach him how to tread the road of it, so that he fits again into the national life, becomes once more a workman with pride in his work, a stake in the country, and the consciousness that, handicapped though he be, he runs the race level with his fellows, and is by that so much the better man than they."

LABORATORY INVESTIGATION OF INFLUENZA.

We have received recently three reprints, by Major Lesley Spooner, M.D., describing the base hospital laboratory at Camp Devens and the bacteriological studies made at this camp during the influenza epidemic. The work of the base hospital laboratory presented itself in three distinct divisions: 1, sanitary bacteriology; 2, routine hospital diagnosis; and 3, technical training. The work in sanitary

bacteriology included not only the usual laboratory examinations of milk and water, but more especially the search for infectious disease carriers, and the usual practice of methods used in detecting meningitis, diphtheria, typhoid, malaria, and hookworm carriers, and gives a report on prophylactic inoculations and vaccinations.

All branches of hospital diagnosis have been centralized in one building, an arrangement which, although making it necessary for a large group to work in small quarters, has the advantage of affording closer supervision of work. Tabulated results of blood cultures for pneumonia show that 50 per cent. of cases showing positive blood cultures recovered, and only 2 per cent. of those with negative cultures died. In carrying out laboratory instruction, it has been found necessary to train officers and enlisted personnel in many phases of work to which they have not been accustomed.

The bacteriological study of the influenza epidemic at Camp Devens has been reported by Lesley H. Spooner, Joseph M. Scott, and Elmer H. Heath, Jr. The first cases of influenza were admitted to the hospital on September 7, and in the course of four or five days the disease had spread considerably. The report of this investigation includes a study of cultures from the lungs, accessory sinuses and heart's blood at necropsy, and those derived from the sputum, naso-pharyngeal secretions, pleural exudates, and blood of patients acutely sick with the disease. The technic employed and the morphology of the cultures are described. The investigators believe it reasonable to suppose that *B. influenzae* was the prime etiological factor in the epidemic, since it was found in such a large proportion of specimens of sputum when the latter was derived from the lower air passages and was properly examined; since the organism was recovered from lungs postmortem in 62 per cent. of those cases carefully studied, and in pure cultures from at least one lobe in 50 per cent. of the same series; and since the blood of patients convalescent from the disease showed a rising agglutinating power not only to their own organism, but also to heterologous cultures.

A third reprint describes the serum of Type 1 pneumonia. Spooner, Sellards, and Wyman found that the mortality of this group, when treated with serum of low titer during their entire course, or only in the last stages with high titer serum, was approximately double that

similarly treated before the epidemic. Patients treated with high titer serum during the entire disease showed a mortality of only 7 per cent.

The work done at the base hospital laboratory at Camp Devens and the bacteriological investigation carried on in connection with a disease which has assumed the seriousness of the recent influenza epidemic is of far-reaching importance, and we are fortunate to have available these reports of the results noted at Camp Devens.

MEDICINE IN THE THIRTEENTH CENTURY.

ONE of the most interesting, complete, and perhaps the earliest of literary accounts of medical history in England is the account of thirteenth century medicine presented by Gilbertus Anglicus in his "Compendium Medicinae." This manuscript was brought to the attention of the Cleveland Medical Library by Dr. Henry E. Handerson, and published after his death by the editorial staff of the *Cleveland Medical Journal*. Gilbert was undoubtedly one of the most famous physicians of his time. We know few of the details of his life; he was probably born in about 1180 and received his early education in England. At the close of the twelfth century, he went to the Continent to complete his studies and then returned to England.

The Compendium is divided into seven books, and the classification follows the usual method of the day—from head to foot. The comprehensiveness of the book will doubtless surprise the modern reader; for besides general diseases, it includes consideration of physiology, physiognomy, ophthalmology, laryngology, otology, gynecology, neurology, dermatology, embryology, obstetrics, dietetics, urinary and venereal diseases, therapeutics, toxicology, operative surgery, cosmetics, and even the hygiene of travel and the prevention of sea-sickness. Of course the book is not free from the superstition of the age. For example, under medical treatment of goitre we find the following advice: "Dig out of the ground while chanting a *pater noster*, a nut which has never borne fruit. The roots and other parts pound well with two hundred grains of pepper, and boil down in the best wine until reduced in volume to one-half. Let the patient

take this freely on an empty stomach until cured."

Gilbert of England was not a surgeon, yet the surgical chapters of the Compendium present a more scientific and complete view of surgical art, as then known, than any contemporaneous writings of the Christian West, outside of Italy. In the Middle Ages, the practice of surgery in western Europe was generally regarded as disreputable, and operative surgery was for the most part relegated to butchers and executioners. Only in Italy did surgery vindicate for itself an equality with medicine. This study of English medicine in the thirteenth century shows a phase in the evolution of English medical history, and reflects the medical science of age and country.

YEAST IN DEFICIENCY DISEASES.

THERE has been manifested recently considerable interest in the use of yeast as a curative agent. Writers have called attention to the value of yeast in various dermatoses, constipation, and other conditions. In the matter of the so-called deficiency diseases, the etiology of these diseases as correlated with the ingestion or non-ingestion of certain food-stuffs has been a matter of current discussion. In considering vitamins and the diseases which may result from a deficient quantity of this substance, it has been pointed out that yeast is very rich in vitamin. Vedder has commented upon the existence of isomerism in yeast and its influence on antineuritic properties. Other writers have pointed out the relationships of scurvy, pellagra, and beri-beri, and it has been suggested that adult scurvy and beri-beri have many factors in common. In experiments on infantile scurvy, the effects of yeast have led several writers to the conclusion that yeast exercises an important effect upon the growth of children. Several writers report the successful use of various forms of yeast in gastroenteritis, with beneficial results to both infants and adults. Cures of chronic gastroenteritis and also of dysenteric diarrhoea have been reported. It is probable that yeast will exert a greater influence on the gastro-intestinal tract when it is given by mouth than when it is given by rectum alone. In some cases, the administration of bismuth or tannalbin may be combined effectively in this treat-

ment. Experiments are being made to test the curative value of yeast in many fields, and it presents an interesting subject for future observation and experiment.

MEDICAL NOTES.

INFLUENZA IN THE UNITED STATES.—Health reports for the week ending February 15, 1919, indicate a general decline in the number of cases of influenza reported. Fewer cases were noted in Alabama, California, Connecticut, Florida, Illinois, Iowa, Kansas, Louisiana, Maine, New Jersey, North Carolina, Ohio, Oklahoma, and Virginia. Arkansas and Vermont reported increases, but the number was not large, and both States show decided decreases as compared with the reports for the week ending February 1. Reports from the zones surrounding Army camps indicate that a slightly smaller number of cases was reported than during the preceding week. With local variations, the number of cases of influenza reported has declined since about the middle of January in all parts of the country from which reports have been received.

PREVENTION OF BLINDNESS.—The fourth annual report of the National Committee for the Prevention of Blindness records the activities of the organization during the year 1918. Classes for the conservation of vision in the public schools have been established. In Massachusetts, the first class was organized, and in that State ten classes are now being conducted by the methods peculiarly adapted to the children of defective vision, who would otherwise be a neglected group in the school system. Special methods and appliances are needed for this class of people who are not totally blind. Cities in Ohio and New York, and perhaps in other States, have provided for these classes. In several States, legislation in the interest of conservation of vision has been secured. Virginia, Louisiana, and Georgia have joined the States having laws for preventing blindness by ophthalmia neonatorum. At least twenty-four States have carried forward prevention of blindness work to some extent, and assistance and advice have been sought by foreign countries. During 1918, 148 lectures were given to audiences aggregating 42,914 people. The commit-

tee has been active in arranging exhibits and in distributing posters and publications. Tables showing the causes of blindness in thirty-four state schools for the blind are included in this report.

SOCIETY FOR THE ADVANCEMENT OF CLINICAL STUDY IN NEW YORK.—A bulletin is issued daily announcing the operations and clinics in the principal hospitals in Greater New York and a Bureau of Information is maintained at the Academy of Medicine, thus making general clinical study easy in this city.

A special endeavor is made to show courtesies to those military surgeons who are temporarily in the city. Daily bulletins will be sent free to them for limited periods if they will send their addresses to the Society for the Advancement of Clinical Study, 17 West 43d street, New York, N. Y.

DEATH RATE IN THE UNITED STATES ARMY.—A report of the Surgeon-General for the week ending January 20 indicated that the health of the troops in the United States continues good. The death rate for disease during that week among the troops in this country was 9.6, as against 9.8 the preceding week. The rate for the week of February 28 of last year was 6.6. There were 107 deaths from all causes the week of February 28, as against 119 the preceding week.

The sick and death rate will continue to be relatively high as the troops are further demobilized, as only the well men are discharged. Another factor that will contribute to a continued high rate here is the constant influx of sick and wounded to this country from overseas.

Pneumonia is increasing in the American Expeditionary Forces, 1,500 new cases having been reported for the week, as compared with 1,289 for the preceding week.

DRUG PRICE CHANGES.—The chief fact to be noticed in regard to the market for pharmaceutical drug products is the manufacturers' announcement of a downward revision in prices for all mercurial preparations as the result of the lowering of the values of quicksilver to a basis of \$80 per flask. The reduction was about on the average with that announced on February 11, the new schedule quoting calomel 11 cents down and corrosive sublimate 4 to 11 cents lower.

Citrate of soda was advanced to the extent of 20 to 30 cents by leading manufacturers as the previous selling schedule was out of line with the raw material.

Glycerine markets are holding steady on the basis of 18 cents a pound for the chemically pure fluid in drums with usual premium asked for cans and other containers. In view of the scarcity of citric acid, which is keeping the price at \$1.25 a pound, minimum, there has been some increase in the demand for substitute products, especially tartaric acid. The views of the trade on cream of tartar have also strengthened somewhat and the range of prices now extends from 58 to 63 cents a pound.

SUICIDES IN THE ARMY.—Statistics compiled by the War Department show that from the date of the entry of the United States into the war to February 21, 1919, there were 339 suicides in the army. 193 of these occurred in the United States and 146 overseas. The figures are below the average per thousand in civil life during the years of 1914-15-16.

BOSTON AND MASSACHUSETTS.

WEEK'S DEATH RATE IN BOSTON.—During the week ending March 8, 1919, the number of deaths reported was 300, against 298 last year, with a rate of 19.64, against 19.88 last year. There were 50 deaths under one year of age, against 42 last year.

The number of cases of principal reportable diseases were: Diphtheria, 56; scarlet fever, 44; measles, 5; whooping cough, 8; typhoid fever, 2; tuberculosis, 61.

Included in the above were the following cases of non-residents: Diphtheria, 2; scarlet fever, 7; tuberculosis, 7.

Total deaths from these diseases were: Diphtheria, 5; scarlet fever 1; typhoid fever, 1; tuberculosis, 28.

Included in the above were the following non-residents: Diphtheria, 2; tuberculosis, 4.

Influenza cases, 176; influenza deaths, 33.

INFLUENZA IN BOSTON AND MASSACHUSETTS.—On March 6, there were reported to the Boston Health Department 24 new influenza cases with 4 deaths, and 12 cases of pneumonia with 8 deaths. On March 7, 25 cases of influenza and 16 of pneumonia were reported, and the deaths numbered 8 of influenza and 4 of pneumonia.

On March 8, 27 new influenza cases with 1

death, and 12 lobar pneumonia cases with 3 deaths were reported to the Boston Health Department. On March 9, there were reported 6 cases of influenza and 6 of pneumonia, with 2 deaths from influenza and 6 from pneumonia. On March 10, 13 new cases of influenza, with 2 deaths, and 1 new case of pneumonia and 5 deaths were reported.

EXAMINATION OF DRUG SAMPLES.—During the month of February the food and drug division of the Massachusetts State Department of Health collected and examined 1,069 samples. Of these samples, 936 were samples of milk, 77 of foods, and 28 of drugs. The police departments submitted 21 samples of liquor and 7 samples of narcotics. There were 44 adulterated milk samples, 2 adulterated food samples, and 17 adulterated drug samples.

Thirteen cases were tried during the month and \$530 in fines paid. Cases were tried in Newburyport, New Bedford, Lowell, Pittsfield, and Worcester.

NEW MEDICAL SOCIETY.—At a meeting of physicians of Rutland, Paxton, Princeton, Sterling, West Boylston, Hubbardston, and Holden, the Wachusett Medical Improvement Society was formed recently. The object of this organization is to "promote the professional and social relations of the members and advance the medical interests of the towns represented."

The following officers were elected: President, Dr. Elisha E. Lewis, Captain, M. R. C., of Princeton; secretary and treasurer, Dr. Ransom A. Race of Paxton. These two with Dr. Washburn will constitute the executive committee. Dr. Harry W. Trask, Lieut. M. R. C. of W. Boylston, gave a talk on "Experience in Training (Camp and Field Hospital)," which was much enjoyed. Capt. Lewis will address the society at its next meeting to be held on March 5 at the home of Lieut. Trask, on "The Venereal Disease Campaign as Promulgated by the War Activities Committee."

TRANSFER OF SURGEONS TO NORTHEASTERN DEPARTMENT.—Three surgeons have recently been transferred to the Northeastern Department. Colonel H. D. Snyder, M.C., who has been on duty with the Army Medical Supply Department, Chicago, will go first to Fort Ethan Allen, Vermont, and will then return to Boston. Major Bertrand D. Ridlon, M.C., who has been

on duty at Camp Johnston, Jacksonville, has been appointed senior doctor at Fort Williams, Portland Harbor. Lieutenant H. Ellsworth Gillett, M.C., who has been on duty at Camp Dix, reported for service in Boston as an assistant in the Northeastern Department medical offices.

EUROPEAN SURGEONS IN BOSTON.—Five European surgeons are visiting this country on the invitation of the Red Cross Institute for Crippled and Disabled Men in New York. Professor V. Putti of Bologna, Dr. Andre Treves of Paris, and Dr. Louis Alleman of Brussels are distinguished experts in orthopedic surgery. Dr. Maurice Bourillon is also an orthopedic surgeon and has written a book on the science of the rehabilitation of men injured in war. Dr. Dronsdard is director of a rehabilitation school in southern France. These men are now visiting Boston, partly to describe what is being done in reconstruction work in France, Belgium, and Italy, and partly to visit reconstruction hospitals in this and in other States. Harvard, the Massachusetts General Hospital, and the institution on Parker Hill, where many of our returned wounded are being cared for, will be visited. The officers of the industrial accident board, which has charge of the work of retaining the victims of industrial accident, will also be of interest to these surgeons. After a few days, they will leave Boston and visit successively New York, Washington, and Philadelphia.

APPRECIATION OF WORK OF CITY HOSPITAL NURSES.—At a meeting of the board of trustees of the Boston City Hospital called to thank publicly the nurses who have worked during the influenza epidemic, it was stated that more than 2700 cases were treated at the hospital, that in the treatment of the disease more than 125 nurses contracted it, and that 9 of them died as a result of it. In an address, Dr. Henry S. Rowen is reported to have said in part:

"Very briefly and very inadequately the trustees desire to offer in this public manner their appreciation of the nursing staff of this hospital during the past fall and winter in combating the epidemic, now more or less quiescent. We desire to express fully our feelings of deep appreciation of the large share of the work you have borne during this very serious and trying time. We know that all of you from the

superintendent down to the probationer have given of your best, that many of you have been invalidated and not a few have made the supreme sacrifice. The trustees again wish to express their sorrow at the loss of so many brave women who died during this period in the execution of their dangerous duty.

"Owing to the war conditions the shortage of male help has been extreme, adding considerably to the stress of your labors. In no small way these obstacles were overcome largely by your generous willingness.

"The trustees desire further to express their appreciation of those among you who felt it their patriotic duty to fit themselves to serve their country best by responding to the call for preparation for the care of the sick and wounded, and in particular to that group of young college women who came to us when our needs were greatest. For the endurance of hardships entailed in combating this unparalleled epidemic and for the devotion you have shown in your beneficent work, and for the high sense of courage you have exhibited, this board in behalf of the citizens of the community, extend their heartiest congratulations to each and every one of you."

RETURN OF LIEUTENANT-COLONEL DOWLING.—Lieutenant-Colonel John J. Dowling, head of Boston City Hospital No. 7 Unit, is returning with twenty-five officers and about two hundred men, and will probably arrive in New York on March 28. The nurses' alumni, and possibly the hospital trustees, are planning a reception for the men on their return.

BENEFITS OF THE FRAMINGHAM DEMONSTRATION.—In the *Bulletin of the National Tuberculosis Association*, the direct benefits which the community has derived from the Framingham Demonstration are summarized. Among the more important results of this health demonstration, the following statements deserve particular attention:

More than 6,000 Framingham citizens have been examined through the Health Station alone, and several thousand of these have been referred to the local physicians for treatment. In addition, the Health Station has, through its own machinery, followed up groups of cases, such as the nose and throat condition among children, and has made every effort to have these conditions corrected.

An intensive search has been made for tuberculosis. Whereas there were 27 cases known when the Demonstration started, there have been under care or advice since January, 1917, approximately 250 cases, many of which have become arrested and are following normal industrial pursuits.

Out of the tuberculosis work has grown an expert consultation service, used now by practically all of the physicians in Framingham. Last year alone this consultation service was responsible for the discovery of approximately 60 cases of tuberculosis, as a result of the aid given local physicians. Part of the time of the consultation service has been devoted to the draft board work, practically all questionable pulmonary cases being gone over by a Health Station representative.

Assistance has been given the community in meeting the influenza situation, by providing extra equipment for both the hospitals, by aiding in the development of the community plan for controlling the situation, by providing two nurses for hospital and district service, by providing an expert medical consultant for diagnosis and treatment, by providing examination facilities for the factory employees before their return to industry.

Several hundred dollars have been devoted to the provision of additional x-ray equipment at one of the hospitals, placed at the service of local physicians, and used by the Health Station in the diagnosis of tuberculosis and other conditions.

In order to benefit infant welfare, assistance was given in financing an extensive Baby Week, and the salary of the infant welfare nurse has been met since the beginning of the Demonstration to date. Many children of pre-school age have been examined in the medical examination work, many have been followed up by nurses to secure the correction of defects, and several hundred children have been provided with summer camp facilities during the two summers of the Demonstration. The Demonstration has agreed to pay the salary of a dental nurse for several months for the benefit of school children.

In factory work, educational literature has been provided for the industries on tuberculosis, general health, and influenza, and advice has been given in regard to the development of factory and medical service.

An extensive educational campaign, through

the use of leaflets, special bulletins, exhibits, health letters, provision of Forum speakers, etc., has aided in the development of hygienic practices among all ages and all types of people in Framingham.

A special study of the local milk situation has been made through the operation of government officials, and plans are being worked out at the request of local producers for the improvement of the economic and sanitary aspects of milk handling in Framingham.

Perhaps the most conspicuous result of the work has been the success which has marked the Demonstration's efforts to have the community meet its own obligations along health lines. The results in this regard have demonstrated that the average American community may be depended upon to do its part in such a plan.

The Framingham health program is both an experiment and a demonstration. Many devices and measures are being experimented with in order to determine their relative value in the prevention of sickness and unnecessary death. The Framingham experience is encouraging, in that it shows that, while this type of work, in so far as it is useful, will directly benefit the community during the period of demonstration, there is, further, every reason to believe that the community will see the value of the work and will endeavor to carry it on under permanent local auspices.

VENEREAL DISEASE.—The following letter has been issued recently by the State Department of Health of Massachusetts and has been distributed to the members of the medical profession:

"Last February we addressed a letter to you calling your attention to the then new regulations requiring the reporting to the State Department of Health of the so-called venereal diseases, syphilis and gonorrhea.

We feel that it may be of interest to you at this time, after ten months of the operation of this law, to learn to what extent this part of the program has achieved its purpose of disclosing the location of cases of these communicable diseases. The total number of cases reported in the routine manner, namely, by serial number, up to February 1, 1919, is 11,864.

The greatest skeptic cannot deny that this is a creditable demonstration of the manner in which the physicians of this State are co-operating with the local boards and with our own de-

partment in the program for the solution of this difficult public health problem.

In spite of the above tangible evidence of the co-operation of the profession as a whole, we are, nevertheless, aware that many physicians are even now not reporting their cases of syphilis and gonorrhea. In some such instances there was apparent failure to receive the original supply of report blanks, serially numbered, from this office; in others we fear the copy of the regulations and blanks met the fate of many another budget of the busy practitioner's mail—the waste basket. In view of this fact we now ask that every physician who, for the above or for any other reason is not supplied with proper blanks and all necessary information with regard to reporting syphilis and gonorrhea, will do us the favor of sending his name and address with the request that he receive all or any part of the outfit sent out to the profession last March. The outfit sent at that time consisted of:

1. A copy of the regulations.
2. Sets of blanks for syphilis and for gonorrhea, with attached instruction sheet to be given to the patient.
3. Blank letters for notification of this Department in case the patient lapses treatment.
4. Blank letters for notification of the physician last treating the case when the patient has recently come under another physician's care.
5. A letter explaining the individual physician's part in the successful carrying out of this program.

We hope that the resources of this office may be taxed to the utmost by the many calls that will result from this reminder of the law regarding the reporting of syphilis and gonorrhea, and that we may thereby be spared the mutually obnoxious method of stimulating regard for the law by the painful spectacle of a member of the profession being called before the courts for neglect of duty.

We believe in the universal desire of our fellow physicians to do their part in this struggle against an age-old and strongly entrenched enemy to human progress and well being.

One detail which we find often overlooked, even by careful physicians, is the last section of the regulations, which reads as follows:

'9. Whenever, in the opinion of the physician reporting the case, because of circumstances or conditions present, the protection of the pub-

lic health demands immediate action by the local board of health, he shall forthwith report the facts as prescribed in Regulation 7 to the State Department of Health, which shall, in turn, proceed as prescribed in Regulation 8. (Adopted at a meeting of the Public Health Council, May 21st, 1918.)'

We urge that you follow the requirement of this section to the letter, in order that this Department may lose no valuable time in setting in motion the wheels of the machinery that may bring the dangerous fugitive back under treatment.'

INSTRUCTIVE DISTRICT NURSING ASSOCIATION.

—The work of the Instructive District Nursing Association during the past year merits especial commendation. This organization has proved itself capable of tremendous expansion in an emergency, and was one of the most active agencies in combating the influenza epidemic. The field of usefulness of the association is growing so rapidly that its activities during the coming year will include the opening of four additional branch stations, and it is hoped that it will be possible to add more nurses, more Ford cars, and more neighborhood committees to its present facilities in order to make public health nurses available to every family in every neighborhood in Boston—an ideal condition which has not yet been attained in spite of the ten stations already established in this city.

During the year 1918, 250,000 visits were made, an increase of 53,213 over the preceding year. During the epidemic of influenza, nursing care was given 7,504 patients, to whom 37,451 visits were made. The results of the after-care given to children suffering from infantile paralysis have been gratifying. Of 177 such children referred to the association by the Harvard Infantile Paralysis Commission, 53 are practically cured and 99 are much improved and are still improving. Of 36 children who were unable to walk when they came under the care of the association, all but three have now regained the ability to walk.

Care was given to 14,048 Boston children during 1918. A baby clinic in Hyde Park and another in Brighton were conducted and 8655 visits were made to the mothers in the homes of these babies. In July, the association established a dietetic bureau in connection with the League of Preventive Work. The experiment made in preventive dentistry in Hyde

Park is worthy of particular attention. Among 485 children of the first and second grades in the public schools, it was found that ninety-five per cent. had dental defects. The association believes that it would be practical to extend this work to other parts of the city.

During the year 1918, the expenses of the association were \$134,000, an increase of \$40,000 over the preceding year. The increased demands for its services, taken in connection with increases in salaries, have made necessary a total budget for 1919 of \$210,000 involving an increase of about fifty per cent. Among the gifts received during the year was one of \$21,000 given by friends in memory of Miss Helen Homans, who died while nursing in France. The income of this gift will be used for the support of a nurse.

It is to be hoped that the Instructive District Nursing Association will receive whatever support and co-operation it may need in carrying out its worthy undertakings.

Obituary.

FRANK WELLS, M.D.

DR. FRANK WELLS, who was for nearly forty years medical director of the John Hancock Life Insurance Company, died March 4, 1919, in the seventy-seventh year of his age. He was born in Boston on October 11, 1842, the son of Charles Bartlett Wells and Maria Louisa (Binney) Wells. He prepared for Harvard at the Boston Latin School, and was graduated from Harvard in 1864 and from Harvard Medical School in 1868. In the following year he received a medical degree from Vienna.

In September, 1862, while in his junior year in college, he enlisted in the Forty-fifth Massachusetts Regiment and served until September, 1863. On his graduation he served on the staff of General Lockwood. After further study of medicine in Dresden, Vienna, Paris, and London, Dr. Wells returned to this country, practised in Andover, and moved to Cleveland, O. While in Cleveland he accepted a chair in the Cleveland Medical School and was a visiting physician at the Cleveland City Hospital. He was also health officer of the city.

Dr. Wells returned to Boston in 1878 to re-

sume the practice of medicine, later practising in Brookline. In 1882 he was appointed medical director of the John Hancock Life Insurance Company. From 1891 to 1894 he was president of the National Association of Life Insurance Medical Directors. For several years he edited the registration reports of Massachusetts. For some time he served as vice-president of the Massachusetts Infants' Asylum and as vice-president of the Massachusetts Emergency and Hygiene Association. He was on the executive committee of the Boston Provident Association and chairman of the school committee of Brookline. He had been a Fellow of the Massachusetts Medical Society since 1878.

He was the author of a book, "Filth in Relation to Disease," and he published a volume of lectures on "Social Hygiene" delivered before the teachers of the Boston schools. He was a member of the Somerset Club and the Harvard Club, and for many years belonged to the Union Club. In 1870, in Paris, he married Gertrude Huidekoper, daughter of Edgar Huidekoper of Meadville, Pa. Mrs. Wells and three children, George D. Wells and Edgar H. Wells, of Boston, and Mrs. J. H. Stabler, of Washington, survive him.

Miscellany.

BOSTON SOCIETY OF PSYCHIATRY AND NEUROLOGY.

At recent meetings of the Boston Society of Neurology and Psychiatry the following resolutions were adopted:

Be It Resolved: That it is with profound sorrow and a deep and abiding sense of loss that the Boston Society of Neurology and Psychiatry enter upon its records the death of its former member, Dr. Frank Chase Richardson.

Immediately subsequent to his graduation in 1879, Dr. Richardson's bent led him to select neurology as his special field. This was a choice well suited to his temperament, and here his early attainments, augmented by his studies at home and abroad and his ever-widening service, soon merited that recognition for high professional ability which he always enjoyed and which successive years but strengthened.

In each of his many years of service, as Pro-

fessor of Nervous Diseases at Boston University School of Medicine, as chief of the neurological clinic at the Out-Patient Department of the Massachusetts Homeopathic Hospital, as neurologist to that hospital, and as director of the Evans Memorial, Dr. Richardson gave of his knowledge and skill to hundreds.

With a personality always awakening both respect and affection, Dr. Richardson's kindly understanding, his wise counsel, and his helpful judgment will be greatly missed, but the remembrance of these and his other qualities will live and be always treasured by his many friends and associates.

Resolved: That these resolutions be spread upon the records of this Society and that a copy be transmitted to Dr. Richardson's family.

HENRY M. POLLOCK,
PHILIP COOMBS KNAPP.

Whereas, in the death of Dr. James Jackson Putnam the medical profession and this Society have lost one who could ill be spared; a descendant of pioneers, and himself a pioneer in his chosen field; who saw neurology advance from modest beginnings until it took its place among the leading branches of medical science, an advance in which he took no inconsiderable part, and

Whereas, the members of the Society not only mourn the loss of a distinguished colleague, but feel themselves bereft of a staunch friend and companion of peculiar charm,

Resolved, that the Society enter upon its records the death of Dr. James Jackson Putnam, and send to the family, with heartfelt sympathy, this expression of our esteem and sorrow.

G. L. WALTON,
W. E. PAUL.

Correspondence.

REHABILITATION OF THE DISABLED.

New York, February 24, 1919.

Mr. Editor:—

I should like to call to the attention of your readers a conference on the rehabilitation of the disabled which is to be held in New York City, from March 18 to 22 inclusive.

This conference, which will be international in its representation and the scope of subjects discussed, should have a special interest for the members of the medical profession, and for all those who play a part

in the restoration of the disabled to the best possible physical condition.

The experience of America and that of the allied governments in occupational therapy, functional restoration, the fitting of artificial limbs, compensation, vocational re-education, and kindred subjects, will be reported upon by experts in those fields.

The conference will be held under the auspices of the Red Cross Institute for Crippled and Disabled Men, and that part of the program relating to the work for blinded soldiers will be directed by the Red Cross Institute for the Blind. Two of the evening meetings will be held in Carnegie Hall and will be open to the public.

Representatives of practically all the governmental agencies in the allied countries dealing with disabled soldiers will attend; acceptances have already been received. Among the authorities to be represented are the British Ministry of Pensions, the French National Institute for War Cripples, the Belgian Military Institute for Crippled Soldiers, the Italian Ministry of Pensions, the Canadian Invalided Soldiers' Commission, the Australian Department of Repatriation, and the Bureau of Re-education and Reconstruction of the American Red Cross in France, in addition to other individual organizations in the respective countries.

Among the authorities in the United States which have promised representation are the Federal Board for Vocational Education, which is providing for American disabled soldiers training for self-support; the Division of Physical Reconstruction of the Office of the Surgeon-General of the Army, which is providing restorative treatment and education during the convalescent period; the Bureau of War Risk Insurance, which furnishes artificial limbs to amputated soldiers of the American Expeditionary Force and pays disability compensation; and the American Red Cross Department of Civilian Relief, which, through its home service section, provides social after-care for disabled men.

The gathering will be unofficial in the governmental sense, but scientifically of great authority, as many of the leaders in the rehabilitation work abroad will come to the United States for the first time to attend its sessions. Their presence here will afford opportunity to American workers in the same field to draw upon the experience of the foreign delegates for the solution of local problems.

While activities in behalf of the disabled soldier will figure largely in the program of both popular and scientific sessions, the interests of the disabled industrial worker will come in for a considerable share of attention. The invitations to the conference designate it as a "conference on the rehabilitation of the disabled man," civilian as well as military. Although the concentration of interest on the injured soldier has been responsible for the revolutionary change in national policies toward the disabled—whereby chief dependence is placed no longer on pensions but rather on the training of men to earn their own living—it is being generally recognized that many more men are disabled annually in industry than have been incapacitated by military service. It is the present aim of authorities having an interest in the cripple in general to apply to the treatment of the disabled civilian the same methods as have been developed to meet the needs of the invalided soldier.

One of the aims of the conference will be to direct public attention to the economy of putting disabled men back on the payroll rather than permitting them to exist in idleness, supported by war pensions or workmen's compensation.

The plans of the various allied governments for the supply of artificial limbs to amputated soldiers, is one of the subjects slated for consideration. The advantages of the adoption of a standard type of leg and arm will be reported upon in detail.

Among the American authorities who will speak at the various sessions are: Col. Frank Billings,

chief of the division of physical reconstruction of the Office of the Surgeon-General of the Army; Lieut.-Col. James Bordley, in charge of work for blinded American soldiers and sailors; Lieut.-Col. Harry E. Mock, in charge of convalescent centers for the Surgeon-General; Dr. Charles A. Prosser, director of the Federal Board for Vocational Education; Dr. J. A. C. Chandler, chief of the rehabilitation department of the same Board; Mr. T. B. Kidner, formerly vocational secretary of the Canadian Invalided Soldiers' Commission and now attached to the staff of the Federal Board; Mr. Curtis E. Lakeman, director of the division of after-care of the Department of Civilian Relief of the American Red Cross; Lieut.-Col. Charles E. Banks, chief medical adviser of the Bureau of War Risk Insurance; and Dr. R. M. Little, of the American Museum of Safety.

Very sincerely,

DOUGLAS C. MCMURTRIE, *Director.*

AN ADDITIONAL HORROR OF WAR.

Mr. Editor:—

My classmate and friend, Dr. William Pearce Cones, has recently called to my attention a small volume entitled *Medical Diseases of the War*. Its author is Arthur F. Hurst, M.A., M.D. (Oxon.), F.R.C.P. This little book has so many excellent qualities that distinguish it from other works of the sort that it deserves the sympathetic consideration of the profession at large. On these qualities I shall not comment further than to signalize the presence from cover to cover of an edifying fusion of science and sound sense.

This communication is in nowise intended as a review. Its purpose is to express hearty approval of what Dr. Hurst has to say about a form of psychic malpractice—psychoanalysis—to which are subjected a certain number of soldier men who risked life and limb in the conflict which, we trust, will ultimately make the world a safe and decent abiding place.

Dr. Hurst says: "A number of Freud's disciples have expressed their opinion that war neuroses are due to unconscious mental conflicts, mostly of a sexual character, and that they should be treated by means of psychoanalysis. . . . I have seen a considerable number of medical case sheets of soldiers who had been in charge of psychoanalysts. In almost every case an attempt appears to have been made to discover some sexual origin of the symptoms, obvious causes such as shell shock and the stress and strain of active service being more or less ignored. Some form of 'Oedipus-complex' was suggested in many instances, simply because the patient had occasionally slept in bed with his mother when a small child, or because her death had caused him much distress. . . . The nasty ideas suggested by a sexual cross-examination and by psychoanalysis are bad enough, but I have seen still more deplorable results of the method. An unmarried sergeant, 26 years old, who was worn out and worried as a result of unaccustomed responsibility, was slowly improving with rest and encouragement, when his 'unconscious mind' was subjected to analysis. A petty larceny he had committed as a boy and had almost forgotten was raked up and in his somewhat emotional condition it caused him acute distress. He had never felt any great sexual desire, but was told on discharge from the hospital that he must indulge himself at least twice a week. He was readmitted a month later very much worse, as his mind was torn between the reluctance he felt to follow this advice, both on account of conscientious scruples and absence of desire, and fear that disobedience would result in insanity. At the same time he felt an almost irre-"

isible impulse to return to the hospital to murder the analyst of his 'unconscious mind.' Encouragement and occupation resulted in slow improvement, but he continued to hide himself at the approach of the Freudian medical officer under whose care he had originally been. . . ."

Upon reading the above passage, my heart went out in sympathy to the poor British Tommy, subjected, even in the wards of his own hospital, to the Hunnish atrocity of Freudianism. My exasperation on learning quite recently that the same inspeakable indignity is being practised in an American military hospital, upon our own wounded from overseas, is utterly beyond my powers of expression. And I take this opportunity to utter an emphatic note of protest in the hope that it may come to the attention of those responsible for the continuance of a practice which, to experienced and well-balanced medical men, is revolting in the extreme.

I hesitate to proffer advice to any learned disciple of Freud who, garbed in an American uniform, follows, in his ministrations to nerve-shattered American soldiers, the pernicious doctrines promulgated from Vienna. I would suggest to him, however, if he has difficulty in understanding why anyone, whether officer or doughboy, should have emerged from the concentrated inferno of modern war with nerves like pack-threads that there is a much simpler and saner method of acquiring this understanding than through the process of mental and moral muck-raking advocated by Freud. I would have him talk with those wearers of the *caducus* (much too seldom of the D. S. C. as well) who, with pack on back, hiked many weary days on end with our gallant fighting men, ate the same rations of monkey meat and hard-tack, slept in the same lousy billets, went with these men over the top and across the blood-soaked and shell-riven horror of No Man's Land and ministered to them where they fell. With the authentic and dependable knowledge of "nerves" thus obtained, the Freudian will have no need to descend, muckrake in hand, into the erotic slime of the apocryphal "unconscious mind."

Very sincerely yours,

J. W. COURTEY.

SOCIETY NOTICES.

MASSACHUSETTS SOCIETY OF EXAMINING PHYSICIANS.—Meeting at the Copley-Plaza Hotel, Boston, March 27, 7 P.M.

1. H. B. Eaton, M.D., U.S.A.M.C.
Experiences at Belleau Wood, Champagne, and St. Mihiel, with Special Reference to the Psycho-Neuroses of War.
2. W. J. Daly, M.D., Boston City Hospital.
The Psycho-Neuroses of Peace.

J. H. STEVENS, M.D., *Secretary.*

THE NEW ENGLAND WOMEN'S MEDICAL SOCIETY.—Will meet at the home of Dr. Emily P. Howard, Van Dyke Street, near Peter Bent Brigham Hospital, Thursday, March 27, at 8 P.M. Speakers: Dr. Mary R. Lakeman, Epidemiologist; Dr. Lily Owen Burbank, Educational Organizer from the venereal disease section of the State Department of Health.

ALICE H. BIGELOW, M.D., *Secretary.*

NEW ENGLAND PEDIATRIC SOCIETY.—The fifty-eighth meeting of the New England Pediatric Society will be held at the Boston Dispensary, on Monday, March 31, 1919, at 8:15 P.M.

Clinical cases will be presented by members of the staff.

Dr. Maynard Ladd will speak briefly of his experiences in France.

WILLIAM E. LADD, M.D., *President.*
RICHARD H. SMITH, M.D., *Secretary.*